Claims

1. (original) A device (1) for controlling an internal combustion engine upon starting,

having a detection means (420) which detects operating parameters of the engine,

characterized in that

a calculation means (410), taking the detected operating parameters before the start of the engine into account, specifies a starting strategy;

- that the calculation means (410), as a function of the specified starting strategy, defines control parameters for controlling a runup to engine operating speed;

- that a control means (430) monitors the runup to engine operating speed;

and that the control means (430), in the event of a runup to engine operating speed that deviates from the starting strategy, adapts the control parameters accordingly.

2. (original) The device (1) as recited in claim 1, characterized in that

the detection means (420) detects a piston position of at least one cylinder;

and that a calculation means (410) specifies a starting strategy, taking into account the at least one piston position detected before the start of the engine.

3. (currently amended) The device (1) as recited in ~~at least one of the foregoing claims~~ claim 1, characterized in that

the detection means (420) detects a piston position of at least one cylinder which is the first to enter compression or an intake stroke upon starting;

and that the calculation means (410) specifies a starting strategy, taking into account at least the piston position detected before a start of the engine.

4. (currently amended) The device (1) as recited in ~~at least one of the foregoing claims~~ claim 1, characterized in that

a memory means stores the control parameters, adapted by the control means (430) upon the runup to engine operating speed, in memory;

and that the control means (430), upon a repeated runup to engine operating speed that deviates from the starting strategy, accesses the control parameters stored in memory.

5. (currently amended) The device (1) as recited in ~~at least one of the foregoing claims~~ claim 1, characterized in that

in an engine with variable valve control, the calculation means (410) defines control parameters for valve control such that the runup to engine operating speed follows the specified starting strategy.

6. (currently amended) The device (1) as recited in ~~at least one of the foregoing claims~~ claim 1, characterized in that

in an engine with variable compression control, the calculation means (410) defines control parameters for compression control such that the runup to engine operating speed follows the specified starting strategy.

7. (currently amended) The device (1) as recited in ~~at least one of the foregoing claims~~ claim 1, characterized in that

the starting strategy defines control parameters which trigger a starter or starter-generator variably over time in its performance and/or rpm.

8. (currently amended) The device (1) as recited in ~~at least one of the foregoing claims~~ claim 1, characterized in that

the calculation means (410), as a function of the operating parameters detected before the start of the engine, recognizes a possible self-ignition operating state of the engine and specifies a starting strategy which prevents this self-ignition operating state.

9. (original) A method for controlling an internal combustion engine, characterized in that

before a start of the engine, taking detected operating parameters into account, a starting strategy for starting the engine is specified;

that as a function of the specified starting strategy, control parameters for controlling a runup to engine operating speed are defined;

that the runup to engine operating speed is monitored and in the event of a runup to engine operating speed deviating from the starting strategy, the control parameters are adapted such that a runup to engine operating speed specified by the starting strategy is adhered to.

10. (original) The method as recited in claim 9, characterized in that the starting strategy is specified, taking at least one detected piston position into account.

11. (original) The method as recited in claim 10, characterized in that a piston position of at least one cylinder, which upon starting first enters compression or an intake stroke,
is detected.

12. (currently amended) The method as recited in ~~at least one of claims 9 through 11~~ claim 9, characterized in that the control parameters adapted upon a runup to engine operating speed are stored in memory and are accessed again in the event of a repeated runup to engine operating speed that deviates from the starting strategy.

13. (currently amended) The method as recited in ~~at least one of claims 9 through 12~~ claim 9, characterized in that in an engine with variable valve control, control parameters for this variable valve control are defined, such that the runup to engine operating speed follows the specified starting strategy.

14. (currently amended) The method as recited in ~~at least one of claims 9 through 12~~ claim 9, characterized in that in an engine with compression control, control parameters for this compression control are defined, such that the runup to engine operating speed follows the specified starting strategy.

15. (currently amended) A computer program product with a program code, which is stored in memory on a machine-readable medium, for performing the method as recited in ~~one of claims 8 through 14~~ claim 8, when the program is executed on a computer or control unit.